

PATENT
Atty. Dkt No. ROC920010003US1
MPS Ref. No.: IBMK10003

IN THE CLAIMS:

Please amend the claims as follows:

1. (Previously Presented) A method for executing location independent procedure calls in a network system, comprising:

determining whether to execute a function on a local node;

if the function cannot be executed on the local node:

selecting, from at least two possible remote nodes, a remote node to execute the function;

executing a route process, wherein the route process comprises:

generating a descriptive data structure for parametric function-related data;

generating a pure value buffer derived from the parametric function-related data; and

flattening the parametric function-related data and the pure value buffer into a bundle;

transmitting the flattened data and descriptive data to the selected remote node;

executing the function on the selected remote node; and

transmitting a result for the function to the local node.

2. (Previously Presented) The method of claim 1, wherein generating a descriptive data structure comprises generating a DTSTRUCT.

3. (Previously Presented) The method of claim 1, wherein the pure value buffer comprises a data-only buffer.

4. (Previously Presented) The method of claim 1, further comprising:

determining if the bundle is cacheable;

determining if the bundle is available in cache memory if it is determined to be cacheable; and

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retrieving a cached reply from the cache memory if the bundle is determined to be cacheable and available in cache memory.

5. (Original) The method of claim 1, wherein determining a remote node to execute a function further comprises reading a parameter associated with the function, wherein the parameter associated with the function indicates where the function may be executed.

6. (Previously Presented) The method of claim 1, wherein flattening comprises assembling each variable argument indicated in the route function into a buffer.

7. (Previously Presented) The method of claim 1, wherein executing the function on the remote node further comprises:

- receiving the bundle on the remote node;
- unpackaging the bundle on the remote node;
- computing the function on the remote node; and
- packaging a function reply.

8. (Previously Presented) The method of claim 7, wherein packaging a function reply further comprises flattening the function reply.

9. (Previously Presented) The method of claim 7, wherein unpackaging the bundle further comprises unflattening the bundle.

10. (Previously Presented) The method of claim 8, further comprising:
receiving the transmitted results of the function on the local node;
determining if the transmitted results are cacheable; and
storing the transmitted results in a cache memory if the transmitted results are determined to be cacheable.

11. (Original) The method of claim 1, further comprising:

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queueing at least one of pre-flattened commands and flattened commands prior to transmission to a remote node; and

cooperatively executing the queued commands in a single network transaction.

12-23. (Cancelled)

24. (Previously Presented) A computer readable medium storing a software program that, when executed by a processor, causes the processor to perform a method comprising:

determining a remote node to execute a function, if the function cannot be run on a local node;

executing a route process configured to assemble a flattened pure value buffer containing parametric function-related data;

transmitting the flattened pure value buffer to the remote node;

executing the function on the remote node; and

transmitting a result for the function to the local node.

25. (Previously Presented) The computer readable medium of claim 24, wherein executing a route process further comprises:

generating a parameter representative of the parametric function-related data; and

packaging the parametric function-related data and the generated parameter for transmission to the remote node.

26. (Previously Presented) The computer readable medium of claim 25, wherein the parameter representative of the parametric function-related data further comprises a text string, wherein each character in the text string corresponds to a particular data type.

27. (Previously Presented) The computer readable medium of claim 25, further comprising:

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determining if the packaged function-related data is cacheable;
determining if the packaged function-related data is available in cache memory if it is determined to be cacheable; and
retrieving a cached reply from the cache memory of the packaged function-related data is determined to be cacheable and available in cache memory.

28. (Original) The computer readable medium of claim 24, wherein determining a remote node to execute a function further comprises reading a parameter associated with the function, wherein the parameter associated with the function indicates where the function may be executed.

29. (Previously Presented) The computer readable medium of claim 25, wherein packaging the function related data and the generated parameter further comprises flattening each variable argument indicated in the route function into the pure value buffer.

30. (Previously Presented) The computer readable medium of claim 24, wherein executing the function on the remote node further comprises:

receiving the parametric function and related data on the remote node;
unpackaging the parametric function-related data on the remote node;
computing the function on the remote node; and
packaging a function reply.

31. (Original) The computer readable medium of claim 30, wherein packaging a function reply further comprises flattening the reply.

32. (Previously Presented) The computer readable medium of claim 30, wherein unpackaging the parametric function-related data further comprises unflattening the function related data.

33. (Original) The computer readable medium of claim 24, further comprising:

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receiving the transmitted results of the function on the local node;
determining if the transmitted results are cacheable; and
storing the transmitted results in a cache memory if the transmitted results are determined to be cacheable.

34. (Original) The computer readable medium of claim 24, further comprising:
queueing at least one of pre-flattened commands and flattened commands prior to transmission to a remote node; and
cooperatively executing the queued commands in a single network transaction.

35-46. (Cancelled)